

ABSTRACT

The present invention is directed to provide a small sized optical apparatus, with low cost and low loss, by realizing a simple structure optimum to bidirectional optical communication. To this end, the present invention comprises three optical multiplexing/demultiplexing sections, in order to make a transmitted light and a received light transmitted bidirectionally in the same transmission path fiber into the light in a single direction, to give these to a single optical processing section (34). The first optical multiplexing/demultiplexing section (31) is connected with a transmission path fiber (2) at a multiplexing side port thereof. The second optical multiplexing/demultiplexing section (32) is connected with an optical output port of an optical transmission section at a demultiplexing side port corresponding to the transmitted light, connected with a demultiplexing side port corresponding to the received light of the first optical multiplexing/demultiplexing section (31) at a demultiplexing side port thereof corresponding to the received light, and connected with an optical input port of an optical processing section (34) at a combined side port thereof. In the third optical multiplexing/demultiplexing section (33) is connected with an optical output port of the optical processing section (34) at a combined side port thereof, connected with a demultiplexing side port corresponding to the transmitted light of the first optical multiplexing/demultiplexing section (31) at a demultiplexing side port thereof corresponding to the transmitted light, and connected with an optical input port of an optical reception section at a demultiplexing side port thereof corresponding to the received light.